

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 53466/234

*In re* patent application of  
TSUCHIYA, Masayuki *et al.*

Serial No.: 09/114,285

Group Art Unit: 1642

Filed: July 13, 1998

Examiner: G. Bansal

For: RESHAPED HUMAN ANTIBODY TO HUMAN INTERLEUKIN-6 RECEPTOR

*Same as  
Amend B  
Paper 9 1/2*

**AMENDMENT ACCOMPANYING SUBSTITUTE SEQUENCE LISTING**  
**IN ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825**

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box SEQUENCE

Sir:

This is a supplemental response to the Official Action mailed October 13, 1999, in connection with the captioned application. A prior response was filed on April 13, 2000. Although applicants believe that no additional fees are required, the Commissioner is hereby authorized to charge any deficiency to Deposit Account No. 19-0741. In addition, if it is determined that any further extensions of time are required for filing this amendment, applicants expressly petition for such extensions. Please amend the application as follows:

**IN THE SPECIFICATION:**

Page 17, line 8, after "VLPM-1" delete "(Residues 21-43 of SEQ ID NO: 29 and SEQ ID NO: 117, respectively)" and insert "--(Residues 1-107 of SEQ ID NO: 29)--;

line 9, after "REI" delete "(SEQ ID NO: 120)" and insert "--(SEQ ID NO: 114)--;

line 10, after "RV<sub>1a</sub>" delete "(SEQ ID NO: 120 and SEQ ID NO: 117, respectively)" and insert --(Residues 1-107 of SEQ ID NO: 64)--;

line 11, after "RV<sub>1b</sub>" insert --(SEQ ID NO: 115)--;

line 17, after "V<sub>L</sub>PM-1" delete "(Residues 55-69 of SEQ ID NO: 29 and SEQ ID NO: 118, respectively)";

line 18, after "REI" delete "(SEQ ID NO: 121)";

line 19, after "RV<sub>1a</sub>" delete "(SEQ ID NO: 121 and SEQ ID NO: 118, respectively)";

line 25, after "V<sub>L</sub>PM-1" delete "(Residues 77-108 of SEQ ID NO: 29 and SEQ ID NO: 119, respectively)";

line 26, after "REI" delete "(SEQ ID NO: 122)";

line 27, after "RV<sub>1a</sub>" delete "(SEQ ID NO: 122 and SEQ ID NO: 119, respectively)".

Page 18, line 3, after "V<sub>L</sub>PM-1" delete "(Residues 118-127 of SEQ ID NO: 29)";

line 4, after "REI" delete "(SEQ ID NO: 123)";

line 5, after "RV<sub>1a</sub>" delete "(SEQ ID NO: 123)".

Page 20, line 6, after "V<sub>H</sub>PM-1" delete "(Residues 19-48 of SEQ ID NO: 31 and SEQ ID NO: 125, respectively)" and insert --(Residues 1-119 of SEQ ID NO: 31)--;

line 7, after "NEW" insert --(SEQ ID NO: 116)--;

line 8, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 128 and SEQ ID NO: 125, respectively)" and insert --(SEQ ID NO: 117)--;

line 9, after "RV<sub>Hb</sub>" delete "(SEQ ID NO: 128)" and insert --(SEQ ID NO: 118)--;

line 10, after "RV<sub>Hc</sub>" delete "(SEQ ID NO: 133)" and insert --(SEQ ID NO: 119)--;

line 11, after "RV<sub>Hd</sub>" delete "(SEQ ID NO: 128)" and insert --(SEQ ID NO: 120)--;

line 12, after "RV<sub>He</sub>" delete "(SEQ ID NO: 133)" and insert --(SEQ ID NO: 121)--;

line 13, after "RV<sub>Hf</sub>" delete "(SEQ ID NO: 135)" and insert --(SEQ ID NO: 122)--;

line 17, after "V<sub>H</sub>PM-1" delete "(Residues 55-68 of SEQ ID NO: 31 and SEQ ID NO: 126, respectively)";

line 18, after "NEW" delete "(SEQ ID NO: 129)";

line 19, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 129 and SEQ ID NO: 126, respectively)";

line 22, after "RV<sub>Hd</sub>" delete "(SEQ ID NO: 134)";

line 23, after "RV<sub>He</sub>" delete "(SEQ ID NO: 134)".

Page 21, line 2, after "V<sub>H</sub>PM-1" delete "(Residues 85-116 of SEQ ID NO: 31)";

line 3, after "NEW" delete "(SEQ ID NO: 130)";

line 4, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 130)";

line 5, after "RV<sub>Hb</sub>" delete "(SEQ ID NO: 132)";

line 6, after "RV<sub>Hc</sub>" delete "(SEQ ID NO: 132)";

line 7, after "RV<sub>Hd</sub>" delete "(SEQ ID NO: 132)";

line 9, after "RV<sub>He</sub>" delete "(SEQ ID NO: 132)";

line 10, after "RV<sub>Hf</sub>" delete "(SEQ ID NO: 132)";

line 14, after "V<sub>H</sub>PM-1" delete "(SEQ ID NO: 127 and residues 127-137 of SEQ ID NO: 31, respectively)";

line 15, after "NEW" delete "(SEQ ID NO: 131)";

line 16, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 131)".

Page 22, line 30, delete "SEQ ID NO 55" and insert --SEQ ID NO: 63--.

Page 23, line 12, delete "SEQ ID NO 54" and insert --SEQ ID NO: 62--.

Page 25, line 22, delete "SEQ ID NOS: 54 and 55" and insert --SEQ ID NOS 61 and 63--.

Page 26, line 22, delete "ID NOS: 57 and 56" and insert --ID NOS 67 and 65--.

Page 29, line 5, after "V<sub>L</sub>AUK 12-20" delete "(Residues 21-43 of SEQ ID NO: 25 and SEQ ID NO: 136, respectively)" and insert --(Residues 1-111 of SEQ ID NO: 25)--;

line 6, after "REI" delete "(SEQ ID NO: 139)" and insert --(SEQ ID NO: 123)--;

line 7, after "RV<sub>L</sub>" delete "(SEQ ID NO: 139 and SEQ ID NO: 136, respectively)" and insert --(SEQ ID NO: 124)--;

line 13, after "V<sub>L</sub>AUK 12-20" delete "(Residues 59-73 of SEQ ID NO: 25 and SEQ ID NO: 137, respectively)";

line 15, after "RV<sub>L</sub>" delete "(SEQ ID NO: 140 and SEQ ID NO: 137, respectively)";

line 19, after "V<sub>L</sub>AUK 12-20" delete "(Residues 81-112 of SEQ ID NO: 25 and SEQ ID NO: 138, respectively)";

line 20, after "REI" delete "(SEQ ID NO: 124)";

line 21, after "RV<sub>L</sub>" delete "(SEQ ID NO: 141 and SEQ ID NO: 138, respectively)";

line 27, after "V<sub>L</sub>AUK 12-20" delete "(Residues 122-131 of SEQ ID NO: 25)";

line 29, after "RV<sub>L</sub>" delete "(SEQ ID NO: 142)".

Page 30, line 23, after "V<sub>H</sub>AUK 12-20" delete "(Residues 20-49 of SEQ ID NO: 27 and SEQ ID NO: 143, respectively)" and insert "--(Residues 1-116 of SEQ ID NO: 27)--;

line 24, after "SGI" insert "--(SEQ ID NO: 125)--;

line 25, after "RV<sub>HA</sub>" delete "(SEQ ID NO: 157 and SEQ ID NO: 143, respectively)" and insert "--(SEQ ID NO: 126)--;

line 26, after "RV<sub>Hb</sub>" insert "--(SEQ ID NO: 127)--;

line 27, after "RV<sub>Hc</sub>" insert "--(SEQ ID NO: 128)--;

line 28, after "RV<sub>Hd</sub>" insert "--(SEQ ID NO: 129)--.

Page 31, line 2, after "V<sub>H</sub>AUK 12-20" delete "(Residues 55-68 of SEQ ID NO: 27 and SEQ ID NO: 144, respectively)";

line 4, after "RV<sub>HA</sub>" delete "(SEQ ID NO: 147 and SEQ ID NO: 144, respectively)";

line 6, after "RV<sub>Hc</sub>" delete "(SEQ ID NO: 151)";

line 7, after "RV<sub>Hd</sub>" delete "(SEQ ID NO: 151)";

line 10, after "V<sub>H</sub>AUK 12-20" delete "(Residues 86-117 SEQ ID NO: 27)";

line 12, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 148)";

line 13, after "RV<sub>Hb</sub>" delete "(SEQ ID NO: 150)";

line 15, after "RV<sub>Hd</sub>" delete "(SEQ ID NO: 150)";

line 19, after "V<sub>H</sub>AUK 12-20" delete "(SEQ ID NO: 145 and residues 125-135 of SEQ ID NO: 27, respectively)";

line 20, after "SGI" delete "(SEQ ID NO: 149)";

line 21, after "RV<sub>Ha</sub>" delete "(SEQ ID NO: 145 and SEQ ID NO: 149, respectively)".

Page 32, line 17, after "V<sub>H</sub>AUK 12-20" delete "(Residues 20-49 of SEQ ID NO: 27 and SEQ ID NO: 143, respectively)" and insert "--(Residues 1-116 of SEQ ID NO: 27)--;

line 18, delete "SGI" and insert "--HAX (SEQ ID NO: 130)--;

line 19, after "1220Ha" delete "(SEQ ID NO: 157 and SEQ ID NO: 143, respectively)" and insert "--(SEQ ID NO: 131)--;

line 20, after "1220Hb" delete "(SEQ ID NO: 157)" and insert "--(SEQ ID NO: 132)--;

line 21, after "1220Hc" delete "(SEQ ID NO: 157)" and insert "--(SEQ ID NO: 133)--;

line 22, after "1220Hd" delete "(SEQ ID NO: 157)" and insert "--(SEQ ID NO: 134)--.

Page 33, line 2, after "V<sub>H</sub>AUK 12-20" delete "(Residues 55-68 of SEQ ID NO: 27 and SEQ ID NO: 144, respectively)";

line 3, after "HAX" delete "(SEQ ID NO: 153)";

line 5, after "1220Ha" delete "(SEQ ID NO: 153 and SEQ ID NO: 144, respectively)";

line 6, after "1220Hb" delete "(SEQ ID NO: 158)";

line 8, after "1220Hd" delete "(SEQ ID NO: 158)";

line 13, after "V<sub>H</sub>AUK 12-20" delete "(Residues 86-117 of SEQ ID NO: 27)";

line 15, after "1220Ha" delete "(SEQ ID NO: 154)";

line 16, after "1220Hb" delete "(SEQ ID NO: 154)";

line 17, after "1220Hc" delete "(SEQ ID NO: 156)";

line 18, after "1220Hd" delete "(SEQ ID NO: 156)";

line 23, after "V<sub>H</sub>AUK 12-20" delete "(SEQ ID NO: 145 and residues 125-135 of SEQ ID NO: 27, respectively)";

line 24, after "HAX" delete "(SEQ ID NO: 149)";

line 25, after "1220Ha" delete "(SEQ ID NO: 145 and SEQ ID NO: 149, respectively)".

Page 35, line 6, delete "NOs: 24, 26, 28 or 30" and insert --NOS 25, 29, 33 or 37--;

line 8, delete "NOs: 25, 27, 29 or 31" and insert --NOS 27, 31, 35 or 39--;

line 10, delete "NOs: 24 to 31" and insert --NOS 24, 26, 28, 30, 32, 34, 36 and 38,--.

Page 36, line 18, delete "NOs: 24" and insert --NOS 25--;  
line 19, delete "26, 28 and 30" and insert --29, 33 and 37--;  
line 21, delete "NOs: 25" and insert --NOS 27--;  
line 22, delete "27, 29 and 31" and insert --31, 35 and 39--.

Page 43, line 28, delete "NOs 24 to 31" and insert --NOS 24, 26, 28, 30, 32, 34, 36 and 38--.

Page 45, line 14, delete "SEQ ID NO: 32" and insert --SEQ ID NO: 40--;  
line 15, delete "SEQ ID NO: 33" and insert --SEQ ID NO: 41--;  
line 21, delete "SEQ ID NO: 34" and insert --SEQ ID NO: 42--;  
line 22, delete "SEQ ID NO: 35" and insert --SEQ ID NO: 43--.

Page 48, line 29, delete "SEQ NO: 38" and insert --SEQ ID NO: 45--;  
line 30, delete "SEQ NO: 40" and insert --SEQ ID NO: 47--;  
line 34, delete "SEQ No: 36" and insert --SEQ ID NO: 44--;  
line 35, delete "SEQ No: 39" and insert --SEQ ID NO: 46--.

Page 49, line 8, delete "SEQ NO: 37" and insert --SEQ ID NO: 42--.



Page 54, line 3, delete "SEQ NO: 41" and insert --SEQ ID NO: 48--; and delete "SEQ NO: 42" and insert --SEQ ID NO: 49--;

line 7, delete "SEQ NO:" and insert --SEQ ID NO:--;

line 8, delete "43" and insert --50--; and delete "SEQ NO: 44" and insert --SEQ ID NO: 51--;

line 9, delete "SEQ NO: 45" and insert --SEQ ID NO: 52--.

Page 55, line 32, delete "ID NO: 46" and insert --ID NO: 53--.

Page 56, line 4, delete "SEQ ID NO: 47" and insert --SEQ ID NO: 54--;

line 7, delete "SEQ ID NO: 48" and insert --SEQ ID NO: 55--;

line 12, delete "SEQ ID NO: 49" and insert --SEQ ID NO: 56--;

line 15, delete "SEQ ID NO: 54" and insert --SEQ ID NO: 61--;

line 20, delete "SEQ ID NO: 50" and insert --SEQ ID NO: 57--;

line 21, delete "SEQ ID NO: 51" and insert --SEQ ID NO: 58--;

line 22, delete "SEQ ID NO: 52" and insert --SEQ ID NO: 59--.

Page 57, line 21, delete "NO: 55" and insert --NO: 63--;

line 24, delete "SEQ ID NO: 53" and insert --SEQ ID NO: 60--.

Page 63, line 33, delete "Nos: 54" and insert --NOS 61--;

line 34, delete "55" and insert --63--.

Page 64, line 5, delete "SEQ ID NO: 60" and insert --SEQ ID NO: 71--;

line 6, delete "NO: 58" and insert --NO: 69--;

line 8, delete "SEQ ID BO: 59" and insert --SEQ ID NO: 70--;

line 30, delete "Nos: 54 and 55" and insert --NOS 61 and 63--.

Page 65, line 3, delete "61" and insert --72--; and delete "SEQ ID NO: 62" and insert --SEQ ID NO: 73--;

line 23, delete "SEQ ID NO: 63" and insert --SEQ ID NO: 74--;

line 24, delete "NO: 64" and insert --NO: 75--;

line 37, delete "NO: 57" and insert --NO: 67--.

Page 66, line 2, delete "SEQ ID NO: 56" and insert --SEQ ID NO: 65--.

Page 67, line 9, delete "83" and insert --95--; and delete "66" and insert --77--;

line 10, delete "65" and insert --76--; and delete "68" and insert --79--;

line 11, delete "67" and insert --78--; and delete "70" and insert --81--;

line 12, delete "69" and insert --80--; and delete "82" and insert --94--.

Page 68, line 22, delete "SEQ ID NO: 71" and insert --SEQ ID NO: 82--.

Page 71, line 8, delete "83" and insert --95--; and delete "73" and insert --85--;

line 9, delete "72" and insert --84--; and delete "75" and insert --87--;

line 10, delete "74" and insert --86--; and delete "77" and insert --89--;

line 11, delete "76" and insert --88--; and delete "82" and insert --94--.

Page 72, line 4, delete "SEQ ID NO: 97" and insert --SEQ ID NO: 112--;  
line 5, delete "SEQ ID NO: 98" and insert --SEQ ID NO: 113--;  
line 10, delete "SEQ ID NO: 82" and insert --SEQ ID NO: 94--;  
line 11, delete "NO: 83" and insert --NO: 95--.

Page 73, line 5, delete "SEQ ID NO: 82" and insert --SEQ ID NO: 94--;  
line 6, delete "ID NO: 78" and insert --ID NO: 90--; and delete "SEQ  
ID NO: 83" and insert --SEQ ID NO: 95--;  
line 7, delete "SEQ ID NO: 79" and insert --SEQ ID NO: 91--;  
line 16, delete "NO: 80" and insert --NO: 92--; and delete "SEQ ID  
NO: 81" and insert --SEQ ID NO: 93--;  
line 21, delete "SEQ ID NO: 78" and insert --SEQ ID NO: 90--; and  
delete "SEQ ID NO: 79" and insert --SEQ ID NO: 91--;  
line 29, delete "SEQ No. 84" and insert --SEQ ID NO: 96--;  
line 33, delete "NO: 85" and insert --NO: 98--.

Page 75, line 9, delete "NOS: 86 to 91" and insert --NOS 100 to 105--;  
line 22, delete "SEQ ID NO: 92" and insert --SEQ ID NO: 106--;  
line 23, delete "NO: 93" and insert --NO: 107--.

Page 76, line 15, delete "SEQ ID NO: 94" and insert --SEQ ID NO: 108--;  
line 23, delete "SEQ ID NO: 95" and insert --SEQ ID NO: 110--;  
line 24, delete "NO: 96" and insert --NO: 111--.

Page 83, at the end of the specification, before the claims, delete the Sequence Listing previously filed and insert the substitute Sequence Listing submitted concurrently herewith.

Please renumber page 149 of the specification as page 155.

IN THE CLAIMS:

Claim 67, line 10, delete "26" and insert --28--;  
line 11, delete "25" and insert --26--;  
line 12, delete "27" and insert --30--.

Claim 71, line 5, delete "26" and insert --28--.

Claim 72, line 5, delete "25 or 27" and insert --26 or 30--.

Claim 73, line 5, delete "26" and insert --28--.

Claim 74, line 5, delete "25 or 27" and insert --26 or 30--.

Claim 75, line 9, delete "26" and insert --28--;  
line 11, delete "25" and insert --26--;  
line 12, delete "27" and insert --30--.

Claim 76, line 9, delete "26" and insert --28--;  
line 11, delete "25" and insert --26--;  
line 12, delete "27" and insert --30--.

Please renumber pages 141 through 148 as pages 147 through 154.

**REMARKS**

Applicants submit this Amendment to insert the required references to SEQ ID NOS of the substitute Sequence Listing filed concurrently herewith, to indicate the insertion point for the Sequence Listing, and to effect the necessary changes in pagination.

Applicants are amending the Sequence Listing to correct errors noted therein, in which SEQ ID NOS 45 and 177-158 of the previously filed Sequence Listing are being deleted because they were duplicates. In addition, SEQ ID NOS 24, 26, 28, 30, 32, 34, 36, 38, 61, 63, 65, 67, 82, 96, 98 and 108 of the substitute Sequence Listing have been amended to identify the signal and material peptides of each sequence. Finally, SEQ ID NOS 114-134 of the substitute Sequence Listing have been included because they were inadvertently omitted from the previously filed Sequence Listing. SEQ ID NOS 114-134 were originally disclosed on pages 17, 20, 29, 30 and 32 of the specification as filed. These corrections do not introduce any new matter and are fully supported by the as-filed application.

Applicants believe the present application is now in condition for allowance.

Respectfully submitted,

June 29, 2000  
Date

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